

In re Patent Application of:

**MARINET**

Serial No. 09/805,265

Filing Date: March 13, 2001

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#### REMARKS

Applicant would like to thank the Examiner for the thorough examination of the present application. The Applicant would also like to thank the Examiner for correctly indicating as allowable the subject matter of dependent Claims 15-19, 21-22, 24, 28-31, 36-39 and 42-44.

FIG. 1 has been amended to label block 20 as helpfully noted by the Examiner. The dependency of Claim 41 has been corrected. The specification has also been amended to correct minor informalities. The arguments supporting patentability of the claims are presented in detail below.

#### I. The Claims Are Patentable

The Examiner rejected independent Claims 11, 25, 34 and 40 over the Stout et al. patent. The present invention, as recited in independent Claim 11, for example, is directed to a pseudo-random number generator comprising a first generator for generating a sawtooth waveform signal having a first frequency, a second generator for generating a pulse signal having a second frequency, and a sampling circuit is connected to the first and second generators for sampling the sawtooth waveform signal using the pulse signal for generating a sample signal of the sawtooth waveform at the second frequency. A coding circuit is connected to the sampling circuit for generating pseudo-random numbers based on the sample signal.

Referring now to the Stout et al. patent, and to FIG. 2 in particular, a first generator 112, 114 generates a sawtooth waveform signal having a first frequency, and a second generator 116, 118 generates a pulse signal having a

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second frequency. The Examiner has taken the position that a sampling circuit 120, 122 samples the sawtooth waveform signal using the pulse signal for generating a sample signal of the sawtooth waveform at the second frequency, as in the claimed invention.

The Applicant respectfully disagrees. In the background section of the Applicant's specification, the Applicant has already noted the deficiencies of the pseudo-random number generator disclosed in Stout et al. The characterized sampling circuit 120, 122 in Stout et al. does not sample the sawtooth waveform signal from the first generator 112, 114 using the pulse signal from the second generator 116, 118.

Instead, the characterized sampling circuit 120, 122 receives the sawtooth waveform signal from the first generator 112, 114 and provides it as input to the second generator 116, 118. The sawtooth waveform signal is used for controlling the second frequency of the second generator 116, 118. Reference is directed to column 2, lines 26-32 of Stout et al., which provides:

"The second current source 118 is coupled at a first control input directly to the output of the first oscillator 112 to be modulated by the saw-tooth waveform output therefrom. As will be discussed further below, the output of the first oscillator 112 is also coupled to a second input of the second current source 118 via a transmission gate 120, which controls an adjust signal Adj1." (Emphasis added.)

In other words, the characterized sampling circuit

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120, 122 does not sample the sawtooth waveform signal from the first generator 112, 114 using the pulse signal from the second generator 116, 118. The characterized sampling circuit 120, 122 is used for increasing the unpredictability of the output signal from the second generator 116, 118.

In sharp contrast, the sampling circuit in the claimed invention is connected to the first and second generators for sampling the sawtooth waveform signal using the pulse signal for generating a sample signal of the sawtooth waveform at the second frequency. Consequently, the coding circuit connected to the sampling circuit generates pseudo-random numbers based on the sample signal, as further recited in Claim 11.

Accordingly, it is submitted that independent Claim 11 is patentable over Stout et al. Independent Claims 25, 34 and 40 are similar to independent Claim 11. In view of the patentability of the independent claims as discussed above, it is submitted that their dependent claims, which recite yet further distinguishing features, are also patentable over the prior art. Thus, these dependent claims require no further discussion herein.

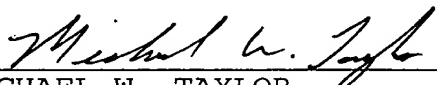
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CONCLUSION

In view of the arguments provided herein, it is submitted that all the claims are patentable. Accordingly, a Notice of Allowance is requested in due course. Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned attorney at the telephone number listed below.

Respectfully submitted,

  
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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: MAIL STOP NON-FEE AMENDMENT, COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450, on this 24<sup>th</sup> day of February, 2004.

  
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